

**We claim:**

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1. A non-aqueous composition comprising:  
an emulsifier;  
a polyol;  
benzyl alcohol; and  
a pharmacologically or biologically active compound.
  2. The composition of claim 1 provided in a form suitable for dilution in aqueous solutions.
  3. The composition of claim 1 wherein the pharmacologically active compound is a parasiticide.
  4. The composition of claim 3 wherein the parasiticide is selected from the group consisting of: ivermectin, doramectin, avermectin, abamectin, milbemycin, amprolium, bacitracin, chlortetracycline, erythromycin, lincomycin/spectinomycin, neomycin, oxytetracycline, piperazine, sarafloxacin, spectinomycin, sulfachloro-pyrazine, sulfadimethoxine, sulfamethazine, sulfaquinoxaline, tetracycline, and tylosin.
  5. The composition of claim 4 wherein the parasiticide is selected from the group consisting of: bacitracin, chlortetracycline, erythromycin, lincomycin, oxytetracycline, piperazine, spectinomycin, and tetracycline.
  6. The composition of claim 3 wherein the parasiticide is ivermectin.
  7. The composition of claim 1 wherein the emulsifier is selected from the group consisting of: polysorbate 80, polysorbate 85, polysorbate 20, and polysiloxanes [organosilicones].
  8. The composition of claim 7 wherein the emulsifier is polysorbate 80.
  9. The composition of claim 1 wherein the polyol is propylene glycol.

10. The composition of claim 1 wherein the emulsifier is polysorbate 80 and the polyol is propylene glycol.
11. The composition of claim 10 wherein the pharmacologically active compound is ivermectin.
12. A non-aqueous composition comprising:  
an emulsifier;  
n-methyl pyrrolidone;  
benzyl alcohol; and  
a pharmacologically or biologically active compound.
13. The composition of claim 12 provided in a form suitable for dilution in aqueous solutions and wherein the pharmacologically active compound is a parasiticide.

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14. The composition of claim 15 wherein the parasiticide is selected from the group consisting of: bacitracin, chlortetracycline, erythromycin, lincomycin, oxytetracycline, piperazine, spectinomycin, and tetracycline.

15. The composition of claim 13 wherein the parasiticide is ivermectin.

16. The composition of claim 18 wherein the emulsifier is polysorbate 80 and the pharmacologically active compound is ivermectin.

17. A method of administering a pharmacologically active compound to a vertebrate, comprising:

providing the pharmacologically active compound in the form of a non-aqueous formulation which further comprises

an emulsifier,

benzyl alcohol, and

a polyol;

diluting the formulation in an aqueous solution; and

administering the compound in the drinking water of the vertebrate.

18. The method of claim 17 wherein the pharmacologically active compound is water labile or water-insoluble.
19. The method of claim 17 wherein the vertebrate is a fowl.
20. The method of claim 17 wherein the vertebrate is a mammal.
21. The method of claim 20 wherein the mammal is selected from the group consisting of: bovines, equines, ovines, caprines, canines, felines, and porcines.
22. The method of claim 17 wherein the pharmacologically active compound is a parasiticide.
23. The method of claim 22 wherein the parasiticide is ivermectin.
24. The method of claim 17 wherein the pharmacologically active compound is selected from the group consisting of: ivermectin, doramectin, avermectin, abamectin, milbemycin, amprolium, bacitracin, chlortetracycline, erythromycin, lincomycin/spectinomycin, neomycin, oxytetracycline, piperazine, sarafloxacin, spectinomycin, sulfachloropyrazine, sulfadimethoxine, sulfamethazine, sulfaquinoxaline, tetracycline, and tylosin.
25. The composition of claim 24 wherein the parasiticide is selected from the group consisting of: bacitracin, chlortetracycline, erythromycin, lincomycin, oxytetracycline, piperazine, spectinomycin, and tetracycline.
26. A method of administering a pharmacologically active compound to a vertebrate, comprising:

providing the pharmacologically active compound in the form of a non-aqueous formulation comprising

an emulsifier,  
benzyl alcohol,  
n-methyl pyrrolidone;

diluting the formulation in an aqueous solution; and

administering the compound in the drinking water of the vertebrate.

27. The method of claim 26 wherein the pharmacologically active compound is water labile or water-insoluble.
28. The method of claim 26 wherein the vertebrate is a fowl or a mammal.
29. The method of claim 26 wherein the pharmacologically active compound is a parasiticide.
30. The method of claim 29 wherein the parasiticide is ivermectin.
31. The method of claim 26 wherein the pharmacologically active compound is selected from the group consisting of: ivermectin, doramectin, avermectin, abamectin, milbemycin, amprolium, bacitracin, chlortetracycline, erythromycin, lincomycin/spectinomycin, neomycin, oxytetracycline, piperazine, sarafloxacin, spectinomycin, sulfachloropyrazine, sulfadimethoxine, sulfamethazine, sulfaquinoxaline, tetracycline, and tylosin.
32. A method of administering a pharmacologically or biologically active compound to an organism comprising:  
providing the biologically active compound in the form of a non-aqueous formulation further comprising an emulsifier, a polyol, and benzyl alcohol;  
diluting the non-aqueous formulation in an aqueous solution;

topically applying the diluted formulation to the organism to be treated.

33. The method of claim 32 wherein the organism is a plant.
34. The method of claim 33 wherein the plant is an agricultural crop.
35. The method of claim 33 wherein the biologically active compound is a pesticide.
36. The method of claim 35 wherein the pesticide is selected from the group consisting of: clofentezine, formetanate hydrochloride, formetanate hydrochloride, hexythiazox, dicofol, fenbutatin oxide, abamectin, and milbemycin, metalaxyl, oxadixyl, azoxystrobin, bayleton, triadimefon baytan, triadimenol, benomyl, chlorothalonil, captan, carboxin, cymoxanil, difenoconazole, mancozeb, difenoconazole, etridiazole, hymexazol, imazalil, fludioxonil, thiabendazole, thiophanate methyl, propiconazole, phenoxy acetic acids, phenoxy propionic acids, mecoprop, phenoxy butyric acids, benzoic acids, fluoroxypyr, picloram, triclopyr, copyralid, permethrin, esfenvalerate, carbaryl, chlorpyrifos, dimethoate, malathion, abamectin, acephate, diflubenzuron, endosulfan, oxydemeton methyl, oxamyl, methidathion, imidacloprid, cyromazine, isazofos, bendiocarb, cyfluthrin, diazinon, bifenthrin, carbofuran, phosmet, methoxychlor, pirimicarb, tebufenozide, azadirachtin, tefluthrin, hexazinone, metribuzin, atrazine, simazine, cyanazine prometon, ametryn, amitrole, clomazone, fluridone, norflurazone, diuron, linuron, tebuthiuron, bromacil, terbacil bentazon, desmedipham, methazole, phenmedipham, propanil, pyridate, oryzalin, pendimethalin, prodiamine, trifluralin, glyphosate, bensulfuron, chlorimuron, chlorsulfuron, metsulfuron, nicosulfuron, primisulfuron, sulfometuron, thifensulfuron, trisulfuron, tribenuron, imazamethabenz, imazapyr, imazaquin, imazethapyr, clethodim, diclofop-methyl, fenoxaprop-ethyl, fluazifop-P-butyl, haloxyfop-methyl, quizalofop, sethoxydim, dichlobenil, isoxaben, diquat, paraquat, acifluorfen, fomesafen, lactofen, oxyfluorfen, glufosinate, bromoxynil, azadirachtin, dihydroazadirachtin, attractants, plant volatiles, oil of anise, indole, oil of orange, cinamaldehyde, geraniol, eugenol, oil of citronella, anthraquinone, capsaicin, linalool, methyl anthranilite, cedarwood oil, canola oil, neem oil, castor oil, jojoba oil, doramectin, gibberellic acid, oil of eucalyptus, linalool.

37. The method of claim 36 wherein the pesticide is abamectin, ivermectin, spinosad, milbemycin oxime, milbemectin, doramectin, permethrin, bifenthrin, azadirachtin, glyphosate, nicosulfuron, bromoxynil, indole, butyric acid, gibberellic acid, capsaicin, methyl anthranilate, neem oil, eugenol, oil of citronella, oil of eucalyptus, linalool.
38. The method of claim 32 wherein the pharmacologically active compound is topically applied by spraying onto the organism to be treated.
39. A method of administering a pharmacologically or biologically active compound to an organism comprising:  
providing the biologically active compound in the form of a non-aqueous formulation further comprising an emulsifier, n-methyl pyrrolidone, and benzyl alcohol;  
diluting the non-aqueous formulation in an aqueous solution;  
topically applying the diluted formulation to the organism to be treated.
40. The method of claim 39 wherein the organism is an agricultural crop.
41. The method of claim 39 wherein the biologically active compound is a pesticide.
42. The method of claim 41 wherein the pesticide is selected from the group consisting of: clofentezine, formetanate hydrochloride, formetanate hydrochloride, hexythiazox, dicofol, fenbutatin oxide, abamectin, and milbemycin, metalaxyl, oxadixyl, azoxystrobin, bayleton, triadimefon baytan, triadimenol, benomyl, chlorothalonil, captan, carboxin, cymoxanil, difenoconazole, mancozeb, difenoconazole, etridiazole, hymexazol, imazalil, fludioxonil, thiabendazole, thiophanate methyl, propiconazole, phenoxy acetic acids, phenoxy propionic acids, mecoprop, phenoxy butyric acids, benzoic acids, fluoroxypyr, picloram, triclopyr, copyralid, permethrin, esfenvalerate, carbaryl, chlorpyrifos, dimethoate, malathion, abamectin, acephate, diflubenzuron, endosulfan, oxydemeton methyl, oxamyl, methidathion, imidacloprid, cyromazine, isazofos, bendiocarb, cyfluthrin, diazinon, bifenthrin, carbofuran, phosmet, methoxychlor, pirimicarb, tebufenozide, azadirachtin, tefluthrin, hexazinone, metribuzin, atrazine, simazine,

cyanazine prometon, ametryn, amitrole, clomazone, fluridone, norflurazone, diuron, linuron, tebuthiuron, bromacil, terbacil bentazon, desmedipham, methazole, phenmedipham, propanil, pyridate, oryzalin, pendimethalin, prodiamine, trifluralin, glyphosate, bensulfuron, chlorimuron, chlorsulfuron, metsulfuron, nicosulfuron, primisulfuron, sulfometuron, thifensulfuron, trisulfuron, tribenuron, imazamethabenz, imazapyr, imazaquin, imazethapyr, clethodim, diclofop-methyl, fenoxaprop-ethyl, fluazifop-P-butyl, haloxyfop-methyl, quizalofop, sethoxydim, dichlobenil, isoxaben, diquat, paraquat, acifluorfen, fomesafen, lactofen, oxyfluorfen, glufosinate, bromoxynil, azadirachtin, dihydroazadirachtin, attractants, plant volatiles, oil of anise, indole, oil of orange, cinamaldehyde, geraniol, eugenol, oil of citronella, anthraquinone, capsaicin, linalool, methyl anthranilate, cedarwood oil, canola oil, neem oil, castor oil, jojoba oil, doramectin, gibberellic acid, oil of eucalyptus, linalool.

43. A method of administering a pharmacologically or biologically active compound to a surface comprising:

providing the pharmacologically or biologically active compound in the form of a non-aqueous formulation comprising an emulsifier, a polyol or n-methyl pyrrolidone, and benzyl alcohol;

diluting the non-aqueous formulation in an aqueous solution;

topically applying the diluted formulation to the surface to be treated.

44. The method of claim 43 wherein the surface is a ground surface.

45. A non-aqueous composition comprising:

an emulsifier;

a polyol;

a monohydric alcohol; and

a pharmacologically or biologically active compound.

46. The composition of claim 45 provided in a form suitable for dilution in aqueous solutions.
47. The composition of claim 45 wherein the pharmacologically active compound is a parasiticide.
48. The composition of claim 47 wherein the parasiticide is selected from the group consisting of: ivermectin, doramectin, avermectin, abamectin, milbemycin, amprolium, bacitracin, chlortetracycline, erythromycin, lincomycin/spectinomycin, neomycin, oxytetracycline, piperazine, sarafloxacin, spectinomycin, sulfachloro-pyrazine, sulfadimethoxine, sulfamethazine, sulfaquinoxaline, tetracycline, and tylosin.
49. The composition of claim 48 wherein the parasiticide is selected from the group consisting of: bacitracin, chlortetracycline, erythromycin, lincomycin, oxytetracycline, piperazine, spectinomycin, and tetracycline.
50. The composition of claim 47 wherein the parasiticide is ivermectin.
51. The composition of claim 45 wherein the emulsifier is polysorbate 80 and the polyol is propylene glycol.
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